

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: STREETWORKS

Report Number: P1062798

Luminaire Tested: **GLAN-SA2B-735-U-T3BC**

Issue Date: 08/07/2025

**Test Information**

Test Method: LM-79-08  
Report Number: P1062798  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 08/07/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: GLAN-SA2B-735-U-T3BC  
Description: GALLEON II AREA AND ROADWAY LUMINAIRE 800mA 2xLight Square PACKAGE  
70CRI 3500K FIXTURE w/ TYPE III ANGLED BACKLIGHT CONTROL  
Light Source: (28) 3500K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9445.4 lumens  
Efficiency: N/A  
Efficacy: 129.7 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B0 - U0 - G2

Input Watts (W): 72.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: 0.97  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT

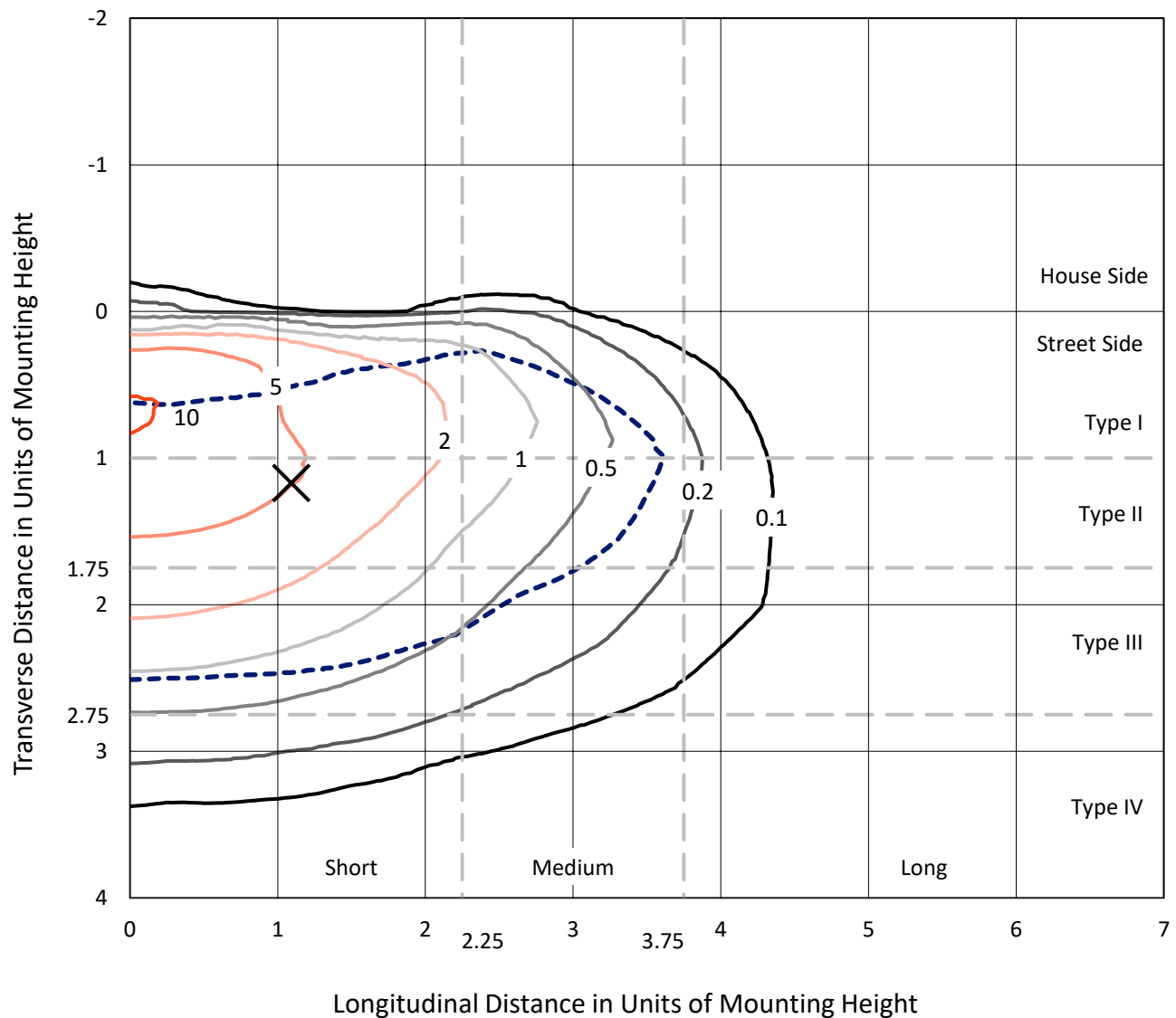


REPORT NUMBER: P1062798

CATALOG NUMBER: GLAN-SA2B-735-U-T3BC

## Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

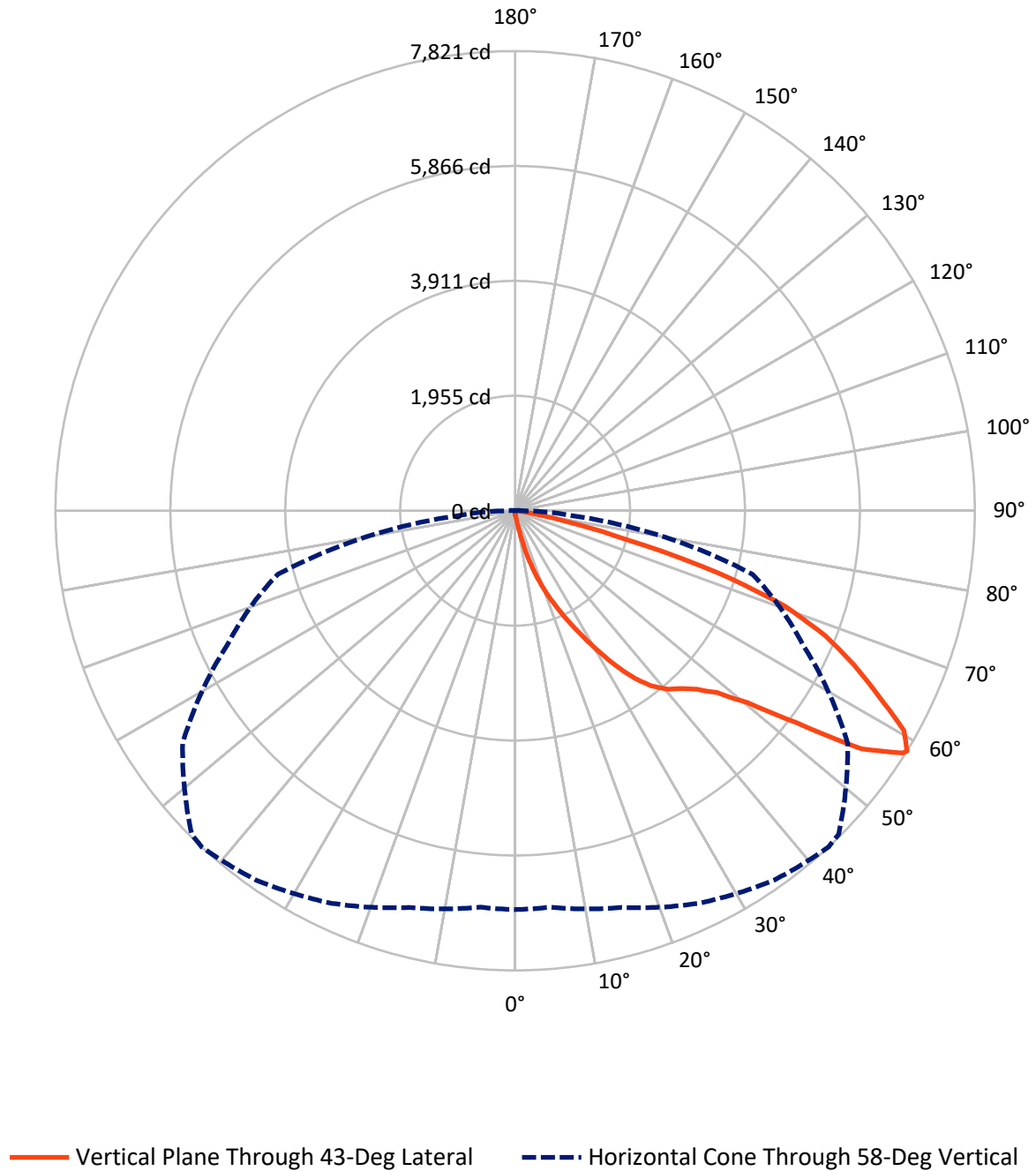


Based on 15 foot mounting height. Maximum calculated value = 10.6 fc  
 Type III - Short - N/A

REPORT NUMBER: P1062798

CATALOG NUMBER: GLAN-SA2B-735-U-T3BC

## Luminous Intensity Polar Plot



REPORT NUMBER: P1062798

CATALOG NUMBER: GLAN-SA2B-735-U-T3BC

**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 34.5     | 0.0    | 34.5   |
|                    | % Fixture | 0.4      | 0.0    | 0.4    |
| <b>Street Side</b> | Lumens    | 9410.9   | 0.0    | 9410.9 |
|                    | % Fixture | 99.6     | 0.0    | 99.6   |
| <b>Total</b>       | Lumens    | 9445.4   | 0.0    | 9445.4 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 9.0    | 0.1       |
| 10°-20°   | 108.6  | 1.1       |
| 20°-30°   | 391.3  | 4.1       |
| 30°-40°   | 895.4  | 9.5       |
| 40°-50°   | 1510.1 | 16.0      |
| 50°-60°   | 2492.1 | 26.4      |
| 60°-70°   | 2785.2 | 29.5      |
| 70°-80°   | 1150.0 | 12.2      |
| 80°-90°   | 103.7  | 1.1       |
| 90°-100°  | 0.0    | 0.0       |
| 100°-110° | 0.0    | 0.0       |
| 110°-120° | 0.0    | 0.0       |
| 120°-130° | 0.0    | 0.0       |
| 130°-140° | 0.0    | 0.0       |
| 140°-150° | 0.0    | 0.0       |
| 150°-160° | 0.0    | 0.0       |
| 160°-170° | 0.0    | 0.0       |
| 170°-180° | 0.0    | 0.0       |
| 0°-90°    | 9445.4 | 100.0     |
| 0°-180°   | 9445.4 | 100.0     |



REPORT NUMBER: P1062798

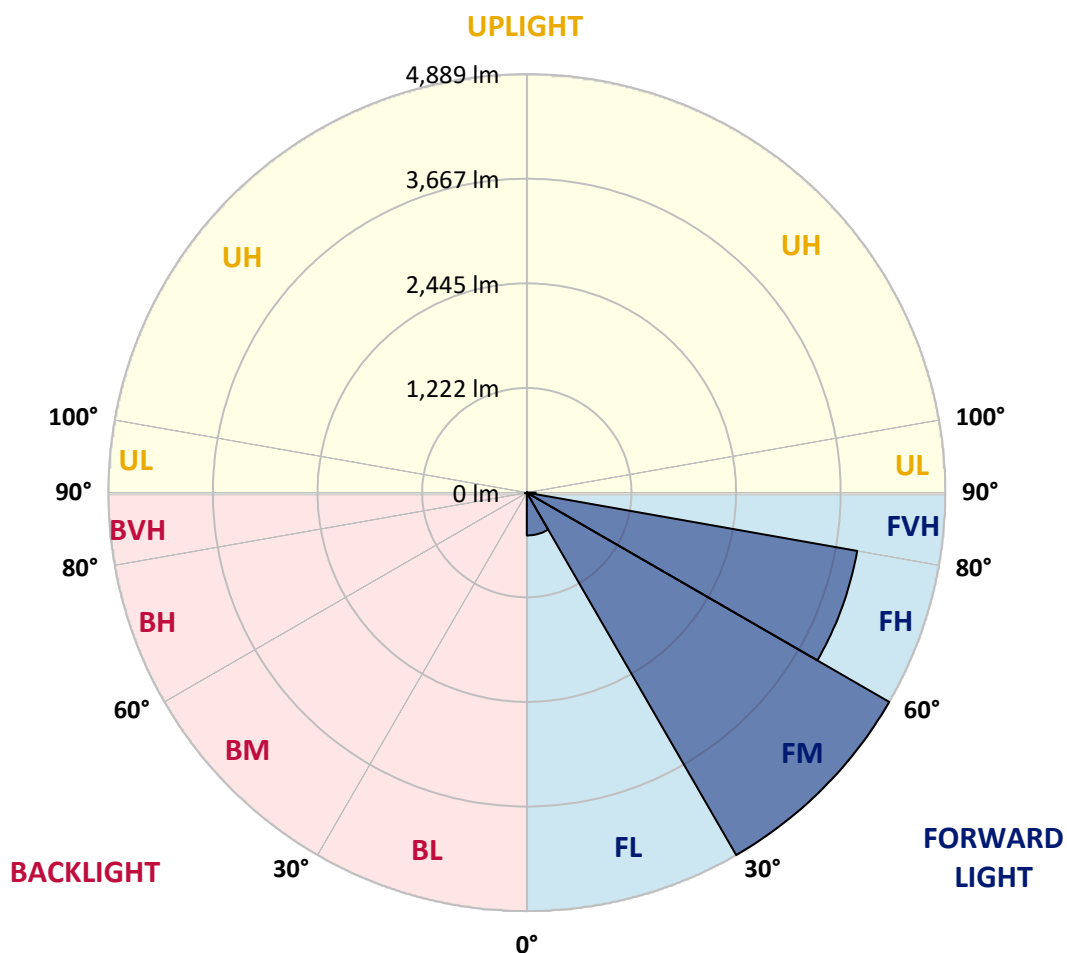
CATALOG NUMBER: GLAN-SA2B-735-U-T3BC

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 500.0  | 5.3       |                         |      |         |
| FM   | (30°-60°)   | 4889.3 | 51.8      |                         |      |         |
| FH   | (60°-80°)   | 3919.4 | 41.5      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 102.3  | 1.1       |                         |      | G2/225  |
| BL   | (0°-30°)    | 9.0    | 0.1       | B0/110                  |      |         |
| BM   | (30°-60°)   | 8.3    | 0.1       | B0/220                  |      |         |
| BH   | (60°-80°)   | 15.8   | 0.2       | B0/110                  |      | G0/110  |
| BVH  | (80°-90°)   | 1.4    | 0.0       |                         |      | G0/10   |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B0-U0-G2**

Type III Short





REPORT NUMBER: P1062798

CATALOG NUMBER: GLAN-SA2B-735-U-T3BC

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 43°    | 45°    | 55°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 61.8   | 61.8   | 61.8   | 61.8   | 61.8   | 61.8   | 61.8   | 61.8   | 61.8   | 61.8   | 61.8   |
| 2.5°  | 74.1   | 76.6   | 74.1   | 74.1   | 74.1   | 71.6   | 71.6   | 69.2   | 69.2   | 66.7   | 64.2   |
| 5°    | 108.7  | 108.7  | 101.3  | 96.3   | 91.4   | 88.9   | 86.5   | 81.5   | 76.6   | 71.6   | 66.7   |
| 7.5°  | 242.1  | 242.1  | 219.9  | 190.2  | 150.7  | 128.5  | 123.5  | 101.3  | 86.5   | 76.6   | 66.7   |
| 10°   | 578.1  | 578.1  | 528.7  | 447.1  | 345.9  | 256.9  | 229.7  | 145.8  | 103.8  | 81.5   | 69.2   |
| 12.5° | 961.0  | 973.3  | 911.6  | 807.8  | 657.1  | 501.5  | 447.1  | 266.8  | 138.3  | 88.9   | 69.2   |
| 15°   | 1304.3 | 1274.7 | 1257.4 | 1158.6 | 1015.3 | 830.0  | 760.9  | 449.6  | 200.1  | 101.3  | 69.2   |
| 17.5° | 1536.6 | 1536.6 | 1511.9 | 1445.2 | 1314.2 | 1151.2 | 1094.4 | 726.3  | 323.6  | 116.1  | 71.6   |
| 20°   | 1808.3 | 1808.3 | 1763.8 | 1716.9 | 1600.8 | 1462.5 | 1408.1 | 1032.6 | 501.5  | 148.2  | 71.6   |
| 22.5° | 2136.9 | 2141.8 | 2092.4 | 2008.4 | 1897.2 | 1744.1 | 1697.1 | 1316.7 | 726.3  | 197.6  | 74.1   |
| 25°   | 2537.1 | 2542.0 | 2470.4 | 2391.3 | 2220.9 | 2055.3 | 1983.7 | 1642.8 | 1000.5 | 276.7  | 74.1   |
| 27.5° | 2979.3 | 3013.8 | 2907.6 | 2771.7 | 2591.4 | 2383.9 | 2329.5 | 1936.8 | 1272.2 | 390.3  | 79.1   |
| 30°   | 3530.1 | 3530.1 | 3389.3 | 3199.1 | 3004.0 | 2747.0 | 2677.9 | 2245.6 | 1561.3 | 541.0  | 84.0   |
| 32.5° | 4004.5 | 3967.4 | 3787.1 | 3587.0 | 3379.5 | 3139.8 | 3065.7 | 2569.2 | 1857.7 | 728.8  | 93.9   |
| 35°   | 4367.6 | 4335.5 | 4113.1 | 3898.2 | 3717.9 | 3498.0 | 3409.1 | 2920.0 | 2171.4 | 941.2  | 108.7  |
| 37.5° | 4678.9 | 4666.5 | 4365.1 | 4095.9 | 3977.3 | 3784.6 | 3705.5 | 3251.0 | 2480.2 | 1170.9 | 126.0  |
| 40°   | 5019.8 | 4980.2 | 4659.1 | 4325.6 | 4147.7 | 3992.1 | 3920.5 | 3517.8 | 2776.7 | 1440.2 | 150.7  |
| 42.5° | 5311.3 | 5264.3 | 4975.3 | 4649.2 | 4345.4 | 4135.4 | 4066.2 | 3742.6 | 3065.7 | 1709.5 | 182.8  |
| 45°   | 5634.9 | 5610.2 | 5318.7 | 5071.6 | 4666.5 | 4330.5 | 4239.1 | 3922.9 | 3330.0 | 2030.6 | 224.8  |
| 47.5° | 6121.5 | 6077.1 | 5805.3 | 5602.8 | 5133.4 | 4627.0 | 4496.1 | 4108.2 | 3584.5 | 2346.8 | 289.0  |
| 50°   | 6687.3 | 6657.6 | 6497.0 | 6336.5 | 5869.6 | 5133.4 | 4977.8 | 4375.0 | 3868.6 | 2722.3 | 373.0  |
| 52.5° | 7149.2 | 7144.3 | 7164.0 | 7166.5 | 6813.2 | 5985.7 | 5753.5 | 4804.8 | 4194.7 | 3092.9 | 491.6  |
| 55°   | 7139.3 | 7161.6 | 7379.0 | 7628.5 | 7655.6 | 7149.2 | 6924.4 | 5528.7 | 4619.6 | 3549.9 | 657.1  |
| 57.5° | 6872.5 | 6855.2 | 7085.0 | 7460.5 | 7724.8 | 7779.2 | 7742.1 | 6652.7 | 5259.4 | 4100.8 | 911.6  |
| 58°   | 6786.1 | 6771.3 | 6988.6 | 7371.5 | 7675.4 | 7821.2 | 7784.1 | 6907.1 | 5402.7 | 4179.8 | 980.7  |
| 60°   | 6472.3 | 6474.8 | 6603.3 | 6951.6 | 7255.4 | 7601.3 | 7635.9 | 7633.4 | 6116.6 | 4708.5 | 1329.1 |
| 62.5° | 6057.3 | 6037.6 | 6156.1 | 6440.2 | 6707.0 | 6939.2 | 6998.5 | 7682.8 | 7161.6 | 5380.4 | 1993.6 |
| 65°   | 5484.2 | 5454.6 | 5580.5 | 5901.7 | 6188.2 | 6338.9 | 6341.4 | 7020.8 | 7653.2 | 6101.8 | 2942.2 |
| 67.5° | 4419.5 | 4394.8 | 4646.7 | 5059.3 | 5501.5 | 5699.1 | 5788.1 | 6091.9 | 7238.2 | 6590.9 | 3485.7 |
| 70°   | 2707.5 | 2759.4 | 3110.2 | 3757.4 | 4513.3 | 4876.5 | 5009.9 | 5103.8 | 6163.5 | 6516.8 | 2915.0 |
| 72.5° | 1250.0 | 1188.2 | 1487.2 | 1939.2 | 2801.4 | 3609.2 | 3747.5 | 4115.6 | 4886.4 | 5657.1 | 2173.9 |
| 75°   | 583.0  | 560.8  | 629.9  | 847.3  | 1269.8 | 1949.1 | 2201.1 | 3285.6 | 3747.5 | 3935.3 | 1568.7 |
| 77.5° | 298.9  | 301.4  | 358.2  | 385.4  | 523.7  | 901.7  | 1035.1 | 2161.6 | 2747.0 | 2196.1 | 1052.4 |
| 80°   | 130.9  | 135.9  | 138.3  | 150.7  | 212.5  | 348.3  | 392.8  | 1003.0 | 1877.5 | 1119.1 | 575.6  |
| 82.5° | 84.0   | 86.5   | 86.5   | 86.5   | 101.3  | 138.3  | 158.1  | 402.7  | 936.3  | 555.8  | 177.9  |
| 85°   | 44.5   | 44.5   | 49.4   | 61.8   | 71.6   | 84.0   | 88.9   | 128.5  | 308.8  | 165.5  | 42.0   |
| 87.5° | 24.7   | 27.2   | 29.6   | 37.1   | 46.9   | 56.8   | 61.8   | 88.9   | 118.6  | 113.6  | 9.9    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |



REPORT NUMBER: P1062798

CATALOG NUMBER: GLAN-SA2B-735-U-T3BC

**CANDELA DISTRIBUTION (continued):**

|       | 90°   | 95°  | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|-------|------|------|------|------|------|------|------|------|------|------|
| 0°    | 61.8  | 61.8 | 61.8 | 61.8 | 61.8 | 61.8 | 61.8 | 61.8 | 61.8 | 61.8 | 61.8 |
| 2.5°  | 64.2  | 61.8 | 59.3 | 56.8 | 54.3 | 51.9 | 51.9 | 51.9 | 51.9 | 51.9 | 51.9 |
| 5°    | 61.8  | 59.3 | 56.8 | 51.9 | 46.9 | 44.5 | 42.0 | 39.5 | 39.5 | 39.5 | 39.5 |
| 7.5°  | 61.8  | 59.3 | 51.9 | 46.9 | 42.0 | 37.1 | 32.1 | 32.1 | 32.1 | 32.1 | 32.1 |
| 10°   | 61.8  | 56.8 | 49.4 | 42.0 | 34.6 | 29.6 | 27.2 | 24.7 | 24.7 | 24.7 | 24.7 |
| 12.5° | 61.8  | 54.3 | 46.9 | 37.1 | 29.6 | 24.7 | 22.2 | 19.8 | 19.8 | 19.8 | 19.8 |
| 15°   | 61.8  | 54.3 | 44.5 | 34.6 | 27.2 | 19.8 | 17.3 | 14.8 | 14.8 | 14.8 | 14.8 |
| 17.5° | 59.3  | 51.9 | 42.0 | 29.6 | 22.2 | 14.8 | 12.4 | 9.9  | 9.9  | 12.4 | 12.4 |
| 20°   | 56.8  | 49.4 | 37.1 | 24.7 | 17.3 | 12.4 | 7.4  | 7.4  | 7.4  | 7.4  | 7.4  |
| 22.5° | 56.8  | 49.4 | 34.6 | 22.2 | 14.8 | 7.4  | 4.9  | 4.9  | 4.9  | 4.9  | 7.4  |
| 25°   | 56.8  | 46.9 | 29.6 | 17.3 | 9.9  | 4.9  | 2.5  | 2.5  | 2.5  | 2.5  | 2.5  |
| 27.5° | 56.8  | 46.9 | 27.2 | 14.8 | 7.4  | 4.9  | 2.5  | 0.0  | 0.0  | 0.0  | 0.0  |
| 30°   | 54.3  | 44.5 | 24.7 | 12.4 | 4.9  | 2.5  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 32.5° | 54.3  | 42.0 | 19.8 | 9.9  | 4.9  | 2.5  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 35°   | 56.8  | 39.5 | 17.3 | 7.4  | 2.5  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 2.5  |
| 37.5° | 59.3  | 37.1 | 14.8 | 4.9  | 2.5  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 40°   | 61.8  | 34.6 | 14.8 | 4.9  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 42.5° | 66.7  | 34.6 | 12.4 | 4.9  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 45°   | 71.6  | 34.6 | 9.9  | 2.5  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 47.5° | 81.5  | 37.1 | 9.9  | 2.5  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 50°   | 88.9  | 39.5 | 7.4  | 2.5  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 52.5° | 98.8  | 37.1 | 7.4  | 2.5  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 55°   | 111.2 | 37.1 | 7.4  | 2.5  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 57.5° | 121.0 | 34.6 | 7.4  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 58°   | 126.0 | 32.1 | 4.9  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 60°   | 150.7 | 29.6 | 4.9  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 62.5° | 234.7 | 24.7 | 4.9  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 65°   | 476.8 | 22.2 | 4.9  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 67.5° | 889.3 | 19.8 | 4.9  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 70°   | 995.6 | 22.2 | 2.5  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 72.5° | 627.5 | 17.3 | 2.5  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 75°   | 331.0 | 17.3 | 2.5  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 77.5° | 165.5 | 17.3 | 2.5  | 2.5  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 80°   | 76.6  | 12.4 | 2.5  | 2.5  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 82.5° | 32.1  | 7.4  | 4.9  | 2.5  | 2.5  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 85°   | 14.8  | 7.4  | 4.9  | 4.9  | 2.5  | 2.5  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 87.5° | 7.4   | 7.4  | 7.4  | 4.9  | 4.9  | 2.5  | 2.5  | 0.0  | 0.0  | 0.0  | 0.0  |
| 90°   | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |



LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

McGraw-Edison

Report Number: SP1-2407-184-5

Test Date: 10/10/2024

Luminaire Tested: GSS-SB1A-735-U-5WQ

Data in this report applies to families of products including GSS-SB1A-735-U-5WQ

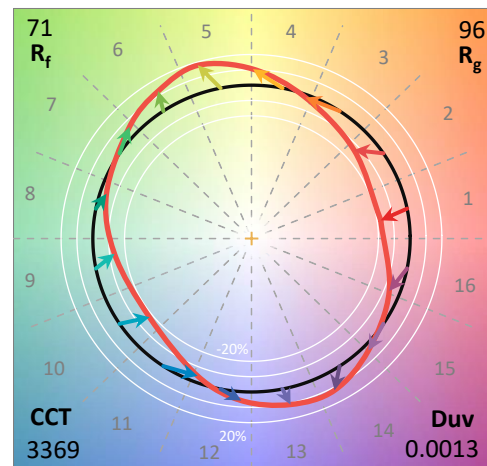
### Test Information

Test Method: LM-79-2019  
 Report Number: SP1-2407-184-5  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP1 - 76IN SPHERE  
 Measurement Geometry:  $4\pi$   
 Issue Date: 10/15/2024  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: McGraw-Edison  
 Catalog Number: **GSS-SB1A-735-U-5WQ**  
 Description: GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI  
 3500K CCT 26 LEDS

### Spectral Parameters

CCT (K): 3369  
 CIE  $u'$ : 0.2386  
 CIE  $v'$ : 0.5156  
 Duv: 0.0013  
 CIE x: 0.4143  
 CIE y: 0.3980  
 CIE z: 0.1877  
 Peak Wavelength (nm): 590  
 Dominant Wavelength (nm): 580  
 Purity: 43.80166  
 R<sub>f</sub>: 71.4  
 R<sub>g</sub>: 96

CRI (Ra): 70.1  
 R1: 66.6  
 R2: 77.6  
 R3: 88.5  
 R4: 69.5  
 R5: 66.4  
 R6: 69.6  
 R7: 77.5  
 R8: 44.9  
 R9: -40.2  
 R10: 49.1  
 R11: 66.3  
 R12: 45.7  
 R13: 68.0  
 R14: 93.4  
 R15: 57.6



### Test Conditions

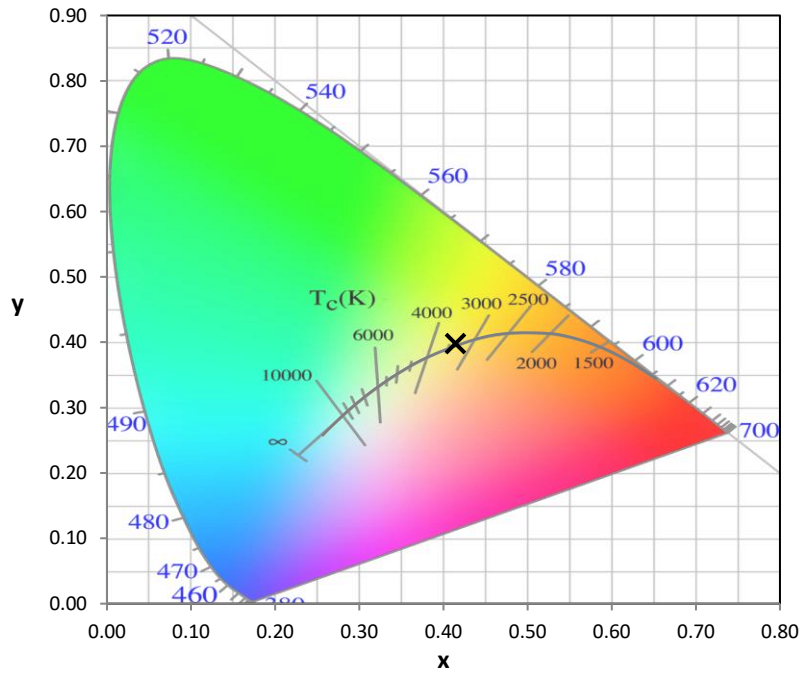
Stabilization Time: 21M  
 Operation Time: 1H 21M  
 Sphere Temperature (°C): 25.2

REPORT NUMBER: SP1-2407-184-5

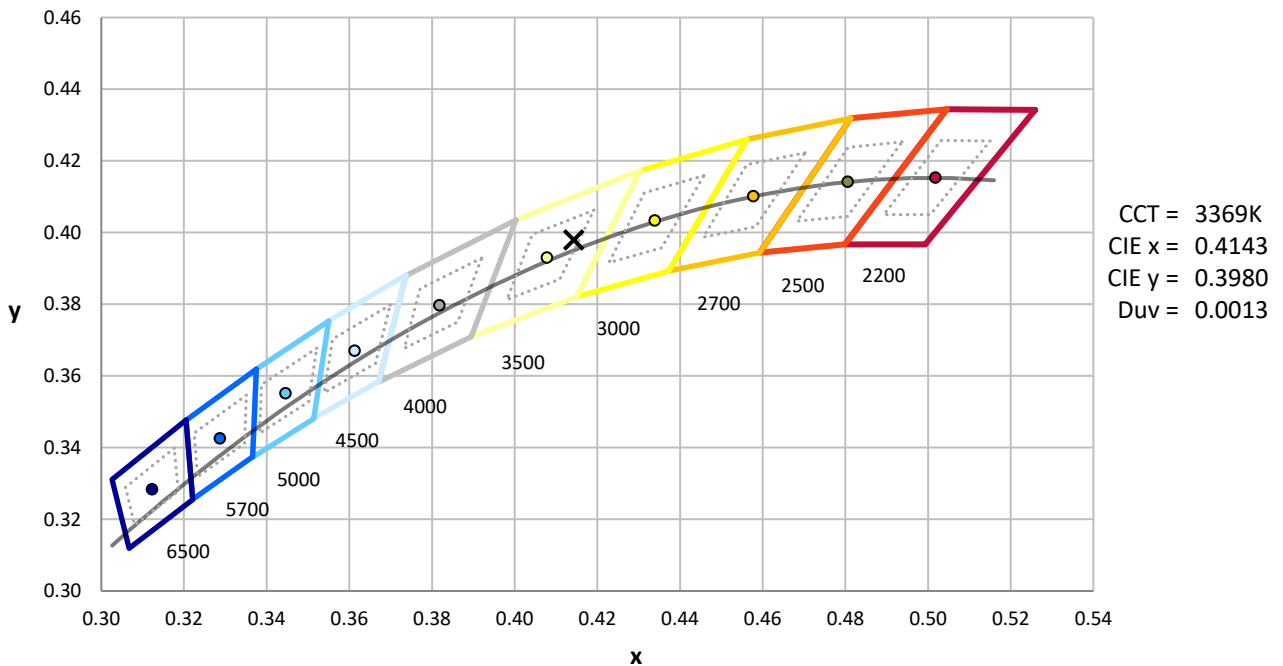
| Measurement and Test Equipment |                       |                  |                      |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument                     | Identification Number | Calibration Date | Calibration Due Date |
| Photometer                     | IN0058                | 6/18/2024        | 12/18/2024           |
| Power Meter                    | INXT2011004           | 2/8/2024         | 2/8/2025             |
| AC Power Source                | IN0063                | 10/24/2023       | 10/24/2024           |
| DC Power Source                | IN0208                | 10/24/2023       | 10/24/2024           |
| Sphere Thermometer             | IN0085                | 10/24/2023       | 10/24/2024           |
| Room Thermometer               | IN0046                | 10/24/2023       | 10/24/2024           |

REPORT NUMBER: SP1-2407-184-5

**CIE 1931 Chromaticity Diagram**



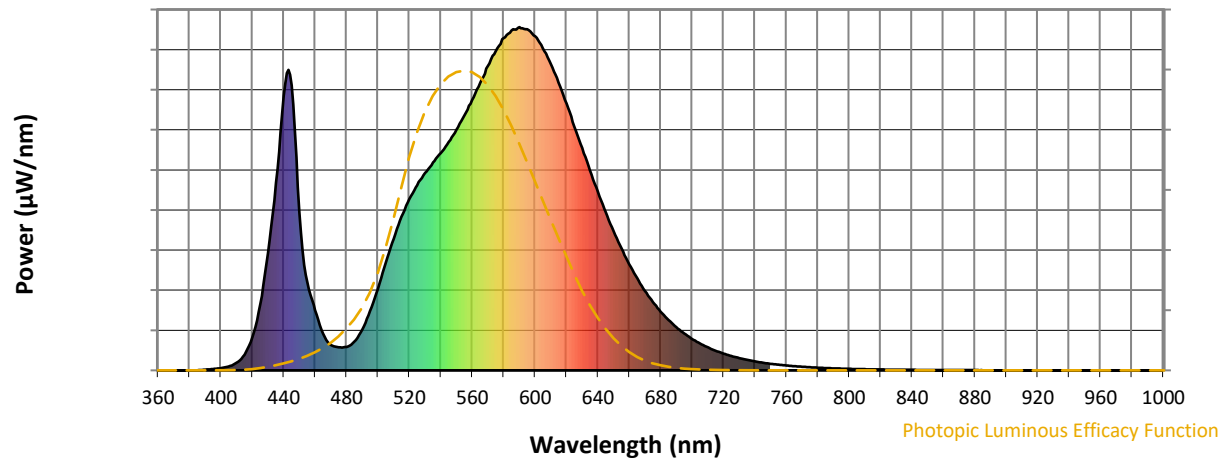
**CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles**



Point lies inside the ANSI 3500K 4-step quadrangle

REPORT NUMBER: SP1-2407-184-5

### Photopic Flux vs. Wavelength

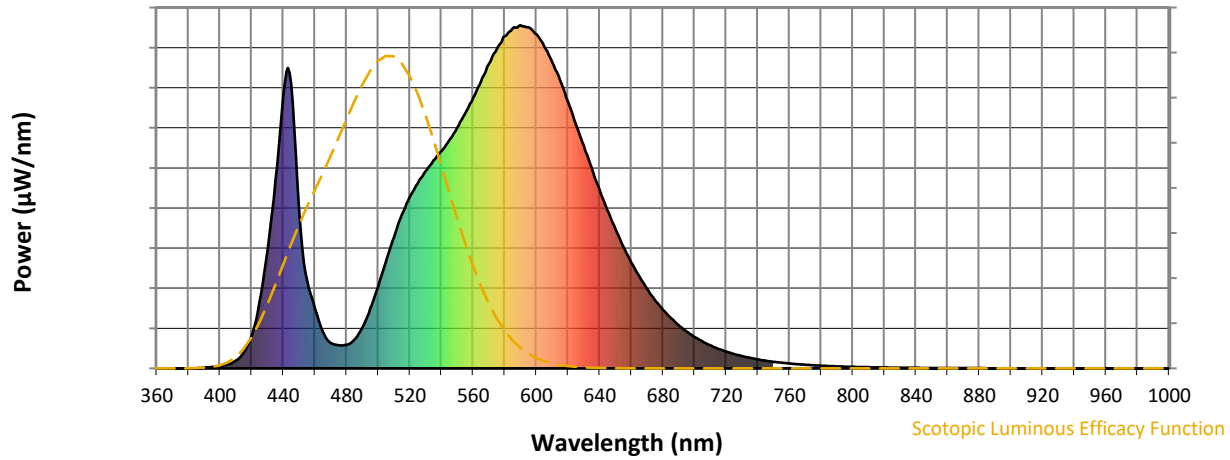


### Photopic Lumens: NR

| $\lambda$<br>(nm) | Power<br>$\text{W}/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) |
|-------------------|-------------------------------|--------------------------------|-------------------|-------------------------------|--------------------------------|-------------------|-------------------------------|--------------------------------|-------------------|-------------------------------|--------------------------------|-------------------|-------------------------------|--------------------------------|
| 360               | 0                             | NR                             | 490               | 119                           | NR                             | 620               | 778                           | NR                             | 750               | 19                            | NR                             | 880               | 1                             | NR                             |
| 365               | 0                             | NR                             | 495               | 173                           | NR                             | 625               | 711                           | NR                             | 755               | 16                            | NR                             | 885               | 0                             | NR                             |
| 370               | 0                             | NR                             | 500               | 239                           | NR                             | 630               | 648                           | NR                             | 760               | 14                            | NR                             | 890               | 0                             | NR                             |
| 375               | 0                             | NR                             | 505               | 313                           | NR                             | 635               | 582                           | NR                             | 765               | 12                            | NR                             | 895               | 0                             | NR                             |
| 380               | 0                             | NR                             | 510               | 383                           | NR                             | 640               | 520                           | NR                             | 770               | 11                            | NR                             | 900               | 0                             | NR                             |
| 385               | 0                             | NR                             | 515               | 448                           | NR                             | 645               | 460                           | NR                             | 775               | 9                             | NR                             | 905               | 0                             | NR                             |
| 390               | 2                             | NR                             | 520               | 500                           | NR                             | 650               | 406                           | NR                             | 780               | 8                             | NR                             | 910               | 0                             | NR                             |
| 395               | 4                             | NR                             | 525               | 539                           | NR                             | 655               | 355                           | NR                             | 785               | 7                             | NR                             | 915               | 0                             | NR                             |
| 400               | 6                             | NR                             | 530               | 575                           | NR                             | 660               | 309                           | NR                             | 790               | 6                             | NR                             | 920               | 0                             | NR                             |
| 405               | 11                            | NR                             | 535               | 606                           | NR                             | 665               | 269                           | NR                             | 795               | 5                             | NR                             | 925               | 0                             | NR                             |
| 410               | 22                            | NR                             | 540               | 633                           | NR                             | 670               | 231                           | NR                             | 800               | 4                             | NR                             | 930               | 0                             | NR                             |
| 415               | 45                            | NR                             | 545               | 666                           | NR                             | 675               | 199                           | NR                             | 805               | 4                             | NR                             | 935               | 0                             | NR                             |
| 420               | 96                            | NR                             | 550               | 701                           | NR                             | 680               | 171                           | NR                             | 810               | 3                             | NR                             | 940               | 0                             | NR                             |
| 425               | 193                           | NR                             | 555               | 743                           | NR                             | 685               | 147                           | NR                             | 815               | 3                             | NR                             | 945               | 0                             | NR                             |
| 430               | 341                           | NR                             | 560               | 788                           | NR                             | 690               | 126                           | NR                             | 820               | 3                             | NR                             | 950               | 0                             | NR                             |
| 435               | 547                           | NR                             | 565               | 837                           | NR                             | 695               | 107                           | NR                             | 825               | 2                             | NR                             | 955               | 0                             | NR                             |
| 440               | 799                           | NR                             | 570               | 887                           | NR                             | 700               | 92                            | NR                             | 830               | 2                             | NR                             | 960               | 0                             | NR                             |
| 445               | 831                           | NR                             | 575               | 931                           | NR                             | 705               | 78                            | NR                             | 835               | 2                             | NR                             | 965               | 0                             | NR                             |
| 450               | 461                           | NR                             | 580               | 967                           | NR                             | 710               | 67                            | NR                             | 840               | 2                             | NR                             | 970               | 0                             | NR                             |
| 455               | 256                           | NR                             | 585               | 990                           | NR                             | 715               | 57                            | NR                             | 845               | 1                             | NR                             | 975               | 0                             | NR                             |
| 460               | 176                           | NR                             | 590               | 1000                          | NR                             | 720               | 49                            | NR                             | 850               | 1                             | NR                             | 980               | 0                             | NR                             |
| 465               | 107                           | NR                             | 595               | 994                           | NR                             | 725               | 42                            | NR                             | 855               | 1                             | NR                             | 985               | 0                             | NR                             |
| 470               | 74                            | NR                             | 600               | 973                           | NR                             | 730               | 36                            | NR                             | 860               | 1                             | NR                             | 990               | 0                             | NR                             |
| 475               | 67                            | NR                             | 605               | 938                           | NR                             | 735               | 31                            | NR                             | 865               | 1                             | NR                             | 995               | 0                             | NR                             |
| 480               | 68                            | NR                             | 610               | 892                           | NR                             | 740               | 26                            | NR                             | 870               | 1                             | NR                             | 1000              | 0                             | NR                             |
| 485               | 84                            | NR                             | 615               | 838                           | NR                             | 745               | 22                            | NR                             | 875               | 1                             | NR                             |                   |                               |                                |

REPORT NUMBER: SP1-2407-184-5

### Scotopic Flux vs. Wavelength



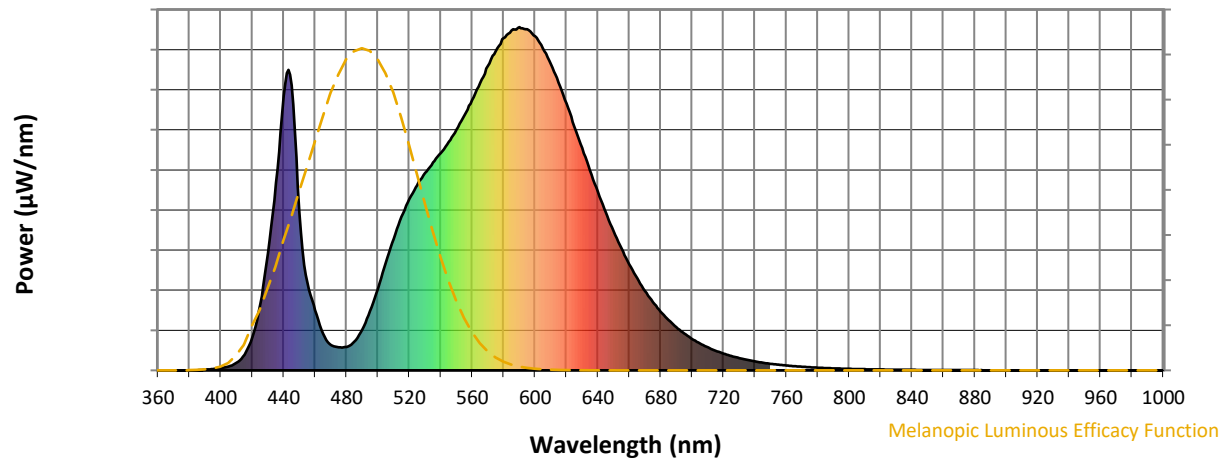
Scotopic Lumens: NR

S/P: 1.29

| λ (nm) | Power W <sup>^</sup> /nm | Lumens (Φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (Φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (Φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (Φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (Φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 360    | 0                        | NR            | 490    | 119                      | NR            | 620    | 778                      | NR            | 750    | 19                       | NR            | 880    | 1                        | NR            |
| 365    | 0                        | NR            | 495    | 173                      | NR            | 625    | 711                      | NR            | 755    | 16                       | NR            | 885    | 0                        | NR            |
| 370    | 0                        | NR            | 500    | 239                      | NR            | 630    | 648                      | NR            | 760    | 14                       | NR            | 890    | 0                        | NR            |
| 375    | 0                        | NR            | 505    | 313                      | NR            | 635    | 582                      | NR            | 765    | 12                       | NR            | 895    | 0                        | NR            |
| 380    | 0                        | NR            | 510    | 383                      | NR            | 640    | 520                      | NR            | 770    | 11                       | NR            | 900    | 0                        | NR            |
| 385    | 0                        | NR            | 515    | 448                      | NR            | 645    | 460                      | NR            | 775    | 9                        | NR            | 905    | 0                        | NR            |
| 390    | 2                        | NR            | 520    | 500                      | NR            | 650    | 406                      | NR            | 780    | 8                        | NR            | 910    | 0                        | NR            |
| 395    | 4                        | NR            | 525    | 539                      | NR            | 655    | 355                      | NR            | 785    | 7                        | NR            | 915    | 0                        | NR            |
| 400    | 6                        | NR            | 530    | 575                      | NR            | 660    | 309                      | NR            | 790    | 6                        | NR            | 920    | 0                        | NR            |
| 405    | 11                       | NR            | 535    | 606                      | NR            | 665    | 269                      | NR            | 795    | 5                        | NR            | 925    | 0                        | NR            |
| 410    | 22                       | NR            | 540    | 633                      | NR            | 670    | 231                      | NR            | 800    | 4                        | NR            | 930    | 0                        | NR            |
| 415    | 45                       | NR            | 545    | 666                      | NR            | 675    | 199                      | NR            | 805    | 4                        | NR            | 935    | 0                        | NR            |
| 420    | 96                       | NR            | 550    | 701                      | NR            | 680    | 171                      | NR            | 810    | 3                        | NR            | 940    | 0                        | NR            |
| 425    | 193                      | NR            | 555    | 743                      | NR            | 685    | 147                      | NR            | 815    | 3                        | NR            | 945    | 0                        | NR            |
| 430    | 341                      | NR            | 560    | 788                      | NR            | 690    | 126                      | NR            | 820    | 3                        | NR            | 950    | 0                        | NR            |
| 435    | 547                      | NR            | 565    | 837                      | NR            | 695    | 107                      | NR            | 825    | 2                        | NR            | 955    | 0                        | NR            |
| 440    | 799                      | NR            | 570    | 887                      | NR            | 700    | 92                       | NR            | 830    | 2                        | NR            | 960    | 0                        | NR            |
| 445    | 831                      | NR            | 575    | 931                      | NR            | 705    | 78                       | NR            | 835    | 2                        | NR            | 965    | 0                        | NR            |
| 450    | 461                      | NR            | 580    | 967                      | NR            | 710    | 67                       | NR            | 840    | 2                        | NR            | 970    | 0                        | NR            |
| 455    | 256                      | NR            | 585    | 990                      | NR            | 715    | 57                       | NR            | 845    | 1                        | NR            | 975    | 0                        | NR            |
| 460    | 176                      | NR            | 590    | 1000                     | NR            | 720    | 49                       | NR            | 850    | 1                        | NR            | 980    | 0                        | NR            |
| 465    | 107                      | NR            | 595    | 994                      | NR            | 725    | 42                       | NR            | 855    | 1                        | NR            | 985    | 0                        | NR            |
| 470    | 74                       | NR            | 600    | 973                      | NR            | 730    | 36                       | NR            | 860    | 1                        | NR            | 990    | 0                        | NR            |
| 475    | 67                       | NR            | 605    | 938                      | NR            | 735    | 31                       | NR            | 865    | 1                        | NR            | 995    | 0                        | NR            |
| 480    | 68                       | NR            | 610    | 892                      | NR            | 740    | 26                       | NR            | 870    | 1                        | NR            | 1000   | 0                        | NR            |
| 485    | 84                       | NR            | 615    | 838                      | NR            | 745    | 22                       | NR            | 875    | 1                        | NR            |        |                          |               |

REPORT NUMBER: SP1-2407-184-5

### Melanopic Flux vs. Wavelength


**Melanopic Lumens: NR**
**M/P: 2.36**

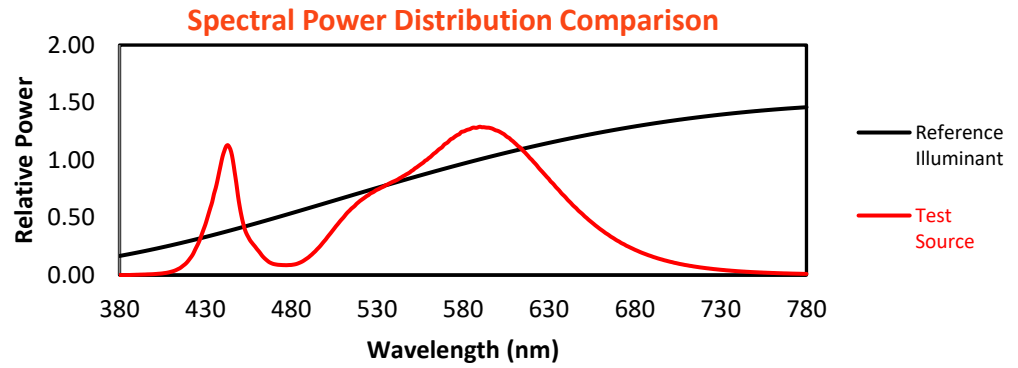
| $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) |
|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|
| 360               | 0                                    | NR                             | 490               | 119                                  | NR                             | 620               | 778                                  | NR                             | 750               | 19                                   | NR                             | 880               | 1                                    | NR                             |
| 365               | 0                                    | NR                             | 495               | 173                                  | NR                             | 625               | 711                                  | NR                             | 755               | 16                                   | NR                             | 885               | 0                                    | NR                             |
| 370               | 0                                    | NR                             | 500               | 239                                  | NR                             | 630               | 648                                  | NR                             | 760               | 14                                   | NR                             | 890               | 0                                    | NR                             |
| 375               | 0                                    | NR                             | 505               | 313                                  | NR                             | 635               | 582                                  | NR                             | 765               | 12                                   | NR                             | 895               | 0                                    | NR                             |
| 380               | 0                                    | NR                             | 510               | 383                                  | NR                             | 640               | 520                                  | NR                             | 770               | 11                                   | NR                             | 900               | 0                                    | NR                             |
| 385               | 0                                    | NR                             | 515               | 448                                  | NR                             | 645               | 460                                  | NR                             | 775               | 9                                    | NR                             | 905               | 0                                    | NR                             |
| 390               | 2                                    | NR                             | 520               | 500                                  | NR                             | 650               | 406                                  | NR                             | 780               | 8                                    | NR                             | 910               | 0                                    | NR                             |
| 395               | 4                                    | NR                             | 525               | 539                                  | NR                             | 655               | 355                                  | NR                             | 785               | 7                                    | NR                             | 915               | 0                                    | NR                             |
| 400               | 6                                    | NR                             | 530               | 575                                  | NR                             | 660               | 309                                  | NR                             | 790               | 6                                    | NR                             | 920               | 0                                    | NR                             |
| 405               | 11                                   | NR                             | 535               | 606                                  | NR                             | 665               | 269                                  | NR                             | 795               | 5                                    | NR                             | 925               | 0                                    | NR                             |
| 410               | 22                                   | NR                             | 540               | 633                                  | NR                             | 670               | 231                                  | NR                             | 800               | 4                                    | NR                             | 930               | 0                                    | NR                             |
| 415               | 45                                   | NR                             | 545               | 666                                  | NR                             | 675               | 199                                  | NR                             | 805               | 4                                    | NR                             | 935               | 0                                    | NR                             |
| 420               | 96                                   | NR                             | 550               | 701                                  | NR                             | 680               | 171                                  | NR                             | 810               | 3                                    | NR                             | 940               | 0                                    | NR                             |
| 425               | 193                                  | NR                             | 555               | 743                                  | NR                             | 685               | 147                                  | NR                             | 815               | 3                                    | NR                             | 945               | 0                                    | NR                             |
| 430               | 341                                  | NR                             | 560               | 788                                  | NR                             | 690               | 126                                  | NR                             | 820               | 3                                    | NR                             | 950               | 0                                    | NR                             |
| 435               | 547                                  | NR                             | 565               | 837                                  | NR                             | 695               | 107                                  | NR                             | 825               | 2                                    | NR                             | 955               | 0                                    | NR                             |
| 440               | 799                                  | NR                             | 570               | 887                                  | NR                             | 700               | 92                                   | NR                             | 830               | 2                                    | NR                             | 960               | 0                                    | NR                             |
| 445               | 831                                  | NR                             | 575               | 931                                  | NR                             | 705               | 78                                   | NR                             | 835               | 2                                    | NR                             | 965               | 0                                    | NR                             |
| 450               | 461                                  | NR                             | 580               | 967                                  | NR                             | 710               | 67                                   | NR                             | 840               | 2                                    | NR                             | 970               | 0                                    | NR                             |
| 455               | 256                                  | NR                             | 585               | 990                                  | NR                             | 715               | 57                                   | NR                             | 845               | 1                                    | NR                             | 975               | 0                                    | NR                             |
| 460               | 176                                  | NR                             | 590               | 1000                                 | NR                             | 720               | 49                                   | NR                             | 850               | 1                                    | NR                             | 980               | 0                                    | NR                             |
| 465               | 107                                  | NR                             | 595               | 994                                  | NR                             | 725               | 42                                   | NR                             | 855               | 1                                    | NR                             | 985               | 0                                    | NR                             |
| 470               | 74                                   | NR                             | 600               | 973                                  | NR                             | 730               | 36                                   | NR                             | 860               | 1                                    | NR                             | 990               | 0                                    | NR                             |
| 475               | 67                                   | NR                             | 605               | 938                                  | NR                             | 735               | 31                                   | NR                             | 865               | 1                                    | NR                             | 995               | 0                                    | NR                             |
| 480               | 68                                   | NR                             | 610               | 892                                  | NR                             | 740               | 26                                   | NR                             | 870               | 1                                    | NR                             | 1000              | 0                                    | NR                             |
| 485               | 84                                   | NR                             | 615               | 838                                  | NR                             | 745               | 22                                   | NR                             | 875               | 1                                    | NR                             |                   |                                      |                                |

REPORT NUMBER: SP1-2407-184-5

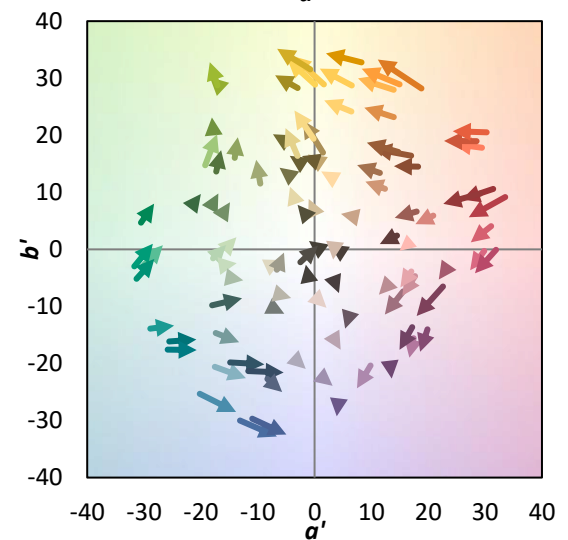
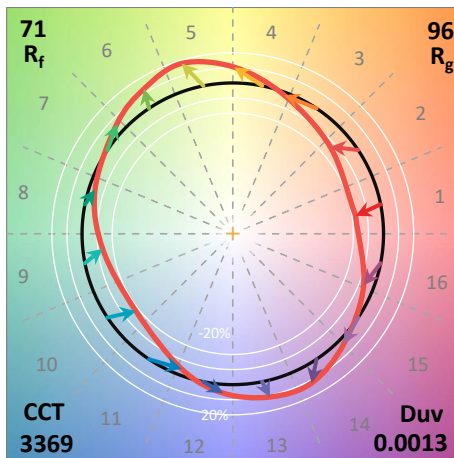
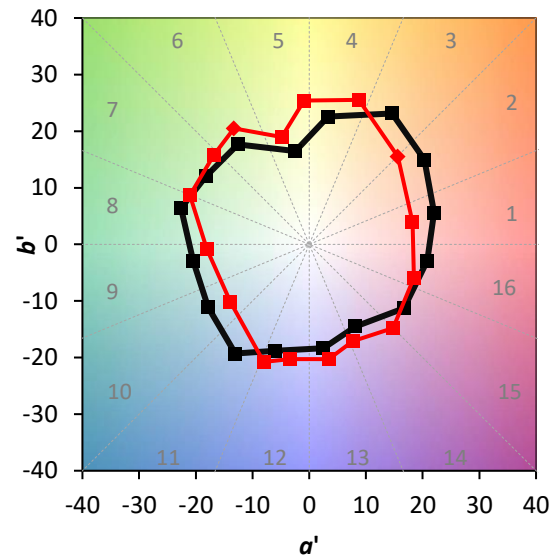
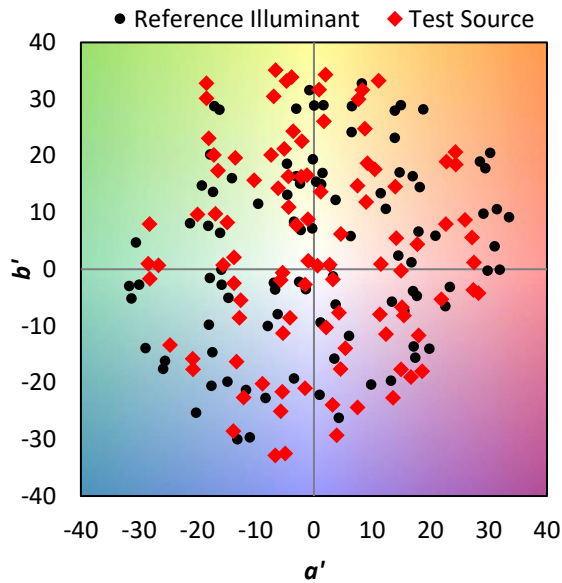
TM-30-18

### Summary

$R_f = 71.4$   
 $R_g = 96$   
 CIE  $R_a = 70.1$   
 $R_g = -40.2$



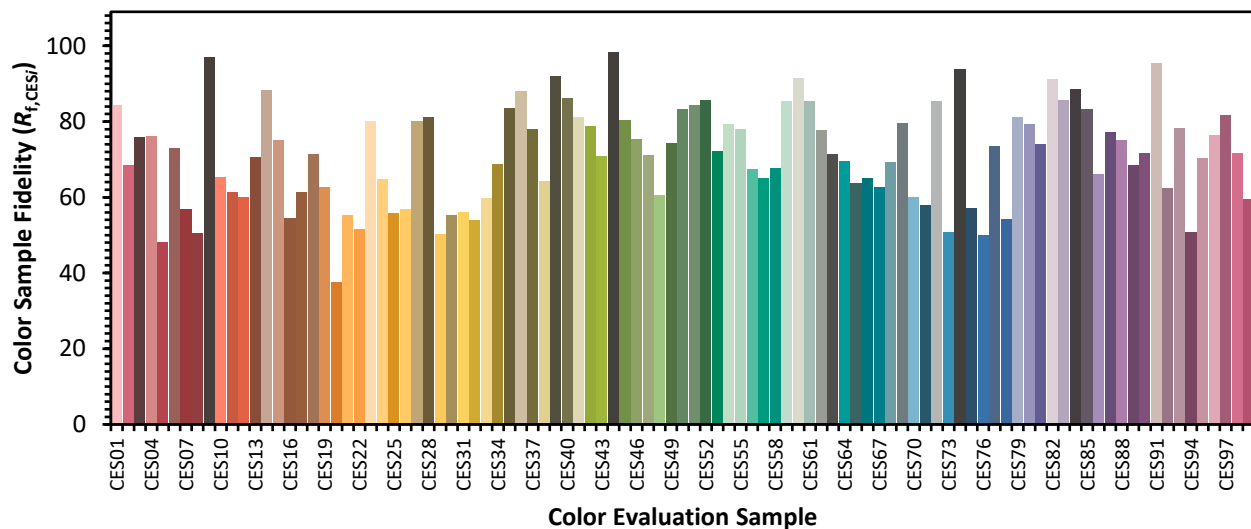
### Color Vector Graphics



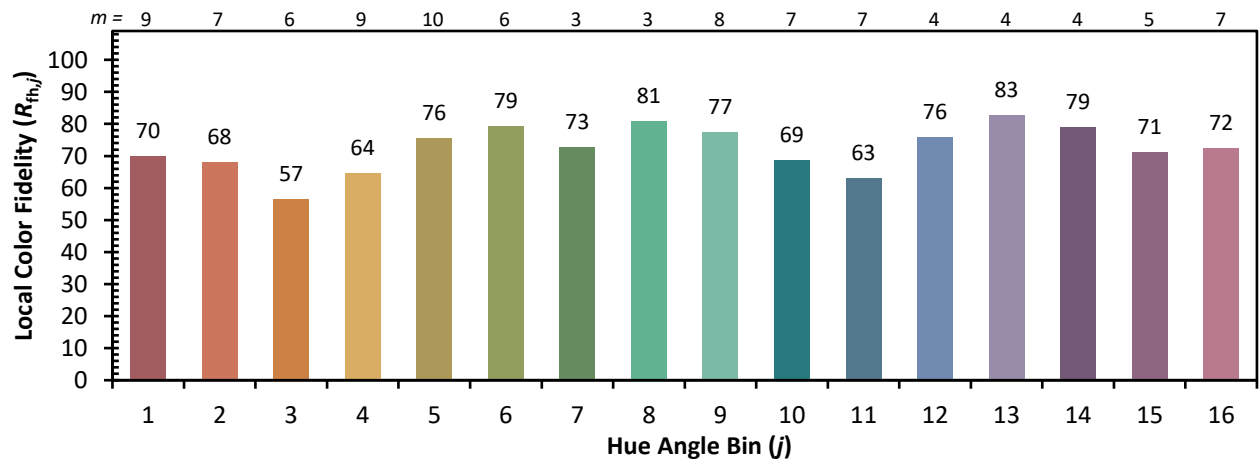
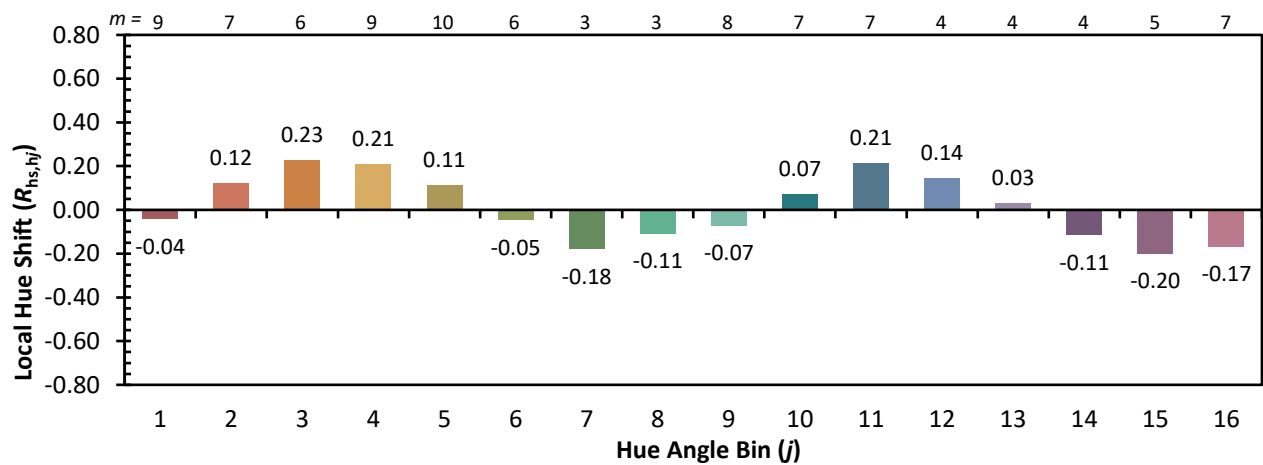
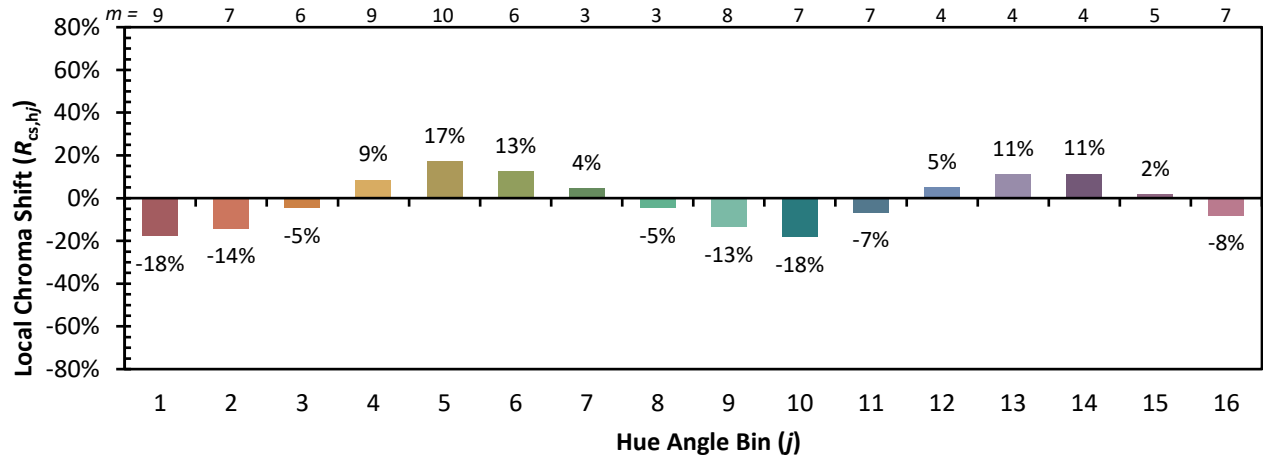


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

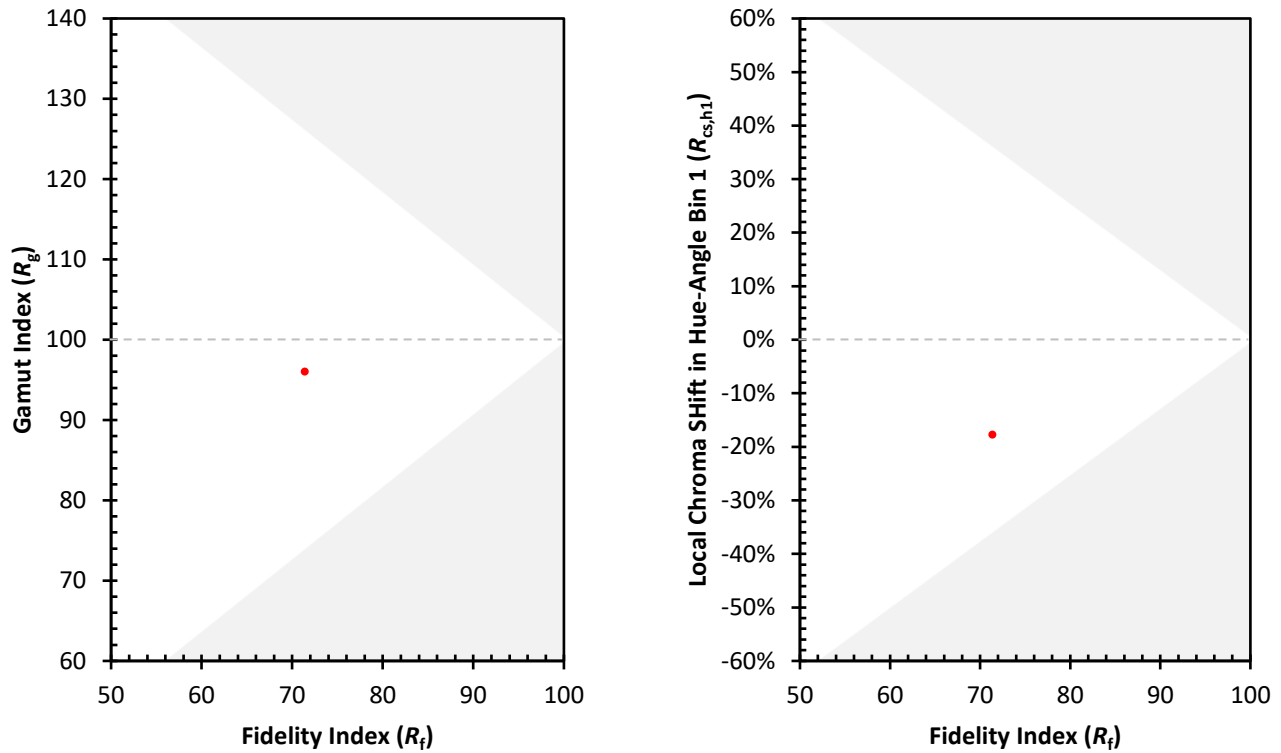
|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 57 | CES51 = 84 | CES76 = 50 |
| CES02 = 62 | CES27 = 80 | CES52 = 86 | CES77 = 74 |
| CES03 = 31 | CES28 = 81 | CES53 = 72 | CES78 = 54 |
| CES04 = 70 | CES29 = 50 | CES54 = 79 | CES79 = 81 |
| CES05 = 48 | CES30 = 55 | CES55 = 78 | CES80 = 79 |
| CES06 = 51 | CES31 = 56 | CES56 = 67 | CES81 = 74 |
| CES07 = 40 | CES32 = 54 | CES57 = 65 | CES82 = 91 |
| CES08 = 39 | CES33 = 60 | CES58 = 68 | CES83 = 86 |
| CES09 = 29 | CES34 = 69 | CES59 = 85 | CES84 = 89 |
| CES10 = 75 | CES35 = 83 | CES60 = 91 | CES85 = 83 |
| CES11 = 58 | CES36 = 88 | CES61 = 85 | CES86 = 66 |
| CES12 = 64 | CES37 = 78 | CES62 = 78 | CES87 = 77 |
| CES13 = 43 | CES38 = 64 | CES63 = 71 | CES88 = 75 |
| CES14 = 74 | CES39 = 92 | CES64 = 70 | CES89 = 68 |
| CES15 = 71 | CES40 = 86 | CES65 = 64 | CES90 = 72 |
| CES16 = 47 | CES41 = 81 | CES66 = 65 | CES91 = 95 |
| CES17 = 50 | CES42 = 79 | CES67 = 63 | CES92 = 62 |
| CES18 = 56 | CES43 = 71 | CES68 = 69 | CES93 = 78 |
| CES19 = 72 | CES44 = 98 | CES69 = 80 | CES94 = 51 |
| CES20 = 65 | CES45 = 80 | CES70 = 60 | CES95 = 70 |
| CES21 = 87 | CES46 = 75 | CES71 = 58 | CES96 = 76 |
| CES22 = 79 | CES47 = 71 | CES72 = 85 | CES97 = 82 |
| CES23 = 92 | CES48 = 61 | CES73 = 51 | CES98 = 72 |
| CES24 = 91 | CES49 = 74 | CES74 = 94 | CES99 = 60 |
| CES25 = 72 | CES50 = 83 | CES75 = 57 |            |



Color Rendition by Hue-Angle Bin



**Measure Comparisons**



(END OF REPORT)